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ABSTRACT

Co-op seminars are a key component of the cooperative education (CE) program at LaGuardia Community College in New York City. All LaGuardia students must enroll in CE and attend a series of co-op seminars that raise general issues about work, occupations in general, and the competencies required on the job. The seminars serve as a form of career exploration and a mechanism of connecting school- and work-based learning. Three levels of generic and major-specific seminars are offered. Like LaGuardia's CE program, the seminars attempt to promote an approach to teaching called TAR (Teach-Apply-Reinforce) and include classroom exercises and fieldwork assignments. Over the past decade, the co-op seminar program has undergone numerous changes, including a movement toward more generic seminars, greater flexibility, and use of union-sponsored and union-supported tutoring in basic skills. The co-op seminars incorporate a range of classroom techniques, including traditional lecture, class discussion, simulations/role play, and faculty sharing of personal experiences. The co-op seminars have proved to be a successful strategy for linking school- and work-based learning and offer a number of lessons for other schools considering establishing similar connecting activities. (Contains 17 references.) (MN)

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National Center for Research in
Vocational Education

University of California, Berkeley

Technical Assistance Report

Linking School-Based and Work-Based Learning: The Implications of Laguardia's Co-op Seminars for School-to-Work Programs

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U.S. DEPARTMENT OF EDUCATION
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LINKING SCHOOL-BASED AND WORK-BASED LEARNING: THE IMPLICATIONS OF LAGUARDIA'S CO-OP SEMINARS FOR SCHOOL-TO-WORK PROGRAMS*

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How best to prepare for work? Historically, work itself was the only way of preparing for work — at a father's right hand, near a mother's knee, in apprenticeship programs both formal and informal, or through on-the-job training. But these methods have their own limitations and politics: they may not be effective for complex occupations, they often limit the range of occupations an individual can consider, and — particularly as the pressures of profit-making have taken over, in the long decline of apprenticeship during the nineteenth and twentieth centuries — they may be more exploitive than nurturing. And so school-based preparation has gradually taken over from work-based preparation, both in the specific sense that professional and occupational education prepares individuals for employment, and in the more general sense that a great deal of schooling is justified by its value in employment.

But not without a sense of loss: The view that school-based preparation is inadequate — too "academic", too removed from the realities of work — has persisted

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* This paper is based on two visits to LaGuardia Community College: one by Norton Grubb in October 1993 to examine both learning communities and the co-op program, as part of a larger study of teaching in community colleges, and a second by Norena Badway in April 1995 to look more particularly at the co-op program and Integrative Seminars. We want to thank the many administrators and instructors at LaGuardia; we experienced the greatest openness and cooperation in our visits. We particularly would like to thank Harry Heinemann, Dean of Cooperative Education; Catherine Farrell, Associate Dean of Cooperative Education; Jeff Weintraub, Director of Research Evaluation and Systems; Julio Ortiz, college assistant in Co-operative Education; and Roberta Matthews, Dean of Instruction. We received helpful comments on an earlier draft from Harry Heinemann and Catherine Farrell, as well as from Gregg Duncan and John Wirt of the Office of Technology Assessment. Some of this research has been supported by the National Center for Research in Vocational Education, the University of California at Berkeley, under a grant from the Department of Education. The analyses and interpretations in this paper are our own, however.

throughout this century. Various reforms have emerged to develop work-based learning either as a substitute for or a complement to school-based learning: in co-op education programs established in 1906; in the continuation schools envisioned by the Smith-Hughes Act of 1917; in the internships that developed in the schools of the Eight-Year Study; in the work experience programs of the 1970s. The most recent renewal of interest in work-based learning is the School-to-Work Opportunities Act (STWOA) of 1994, which provides federal seed money for school-to-work programs incorporating both school-based learning, work-based learning, and connecting activities to make the two consistent with each other.

In trying to design school-to-work programs, there are relatively few examples or models in this country from which individuals attempting to develop new programs might learn. The recent experimental efforts are too new or too special to provide much guidance, and many earlier efforts to develop work-based learning have either disappeared or are small in numbers.[1] The exemplars of connecting activities are particularly scarce, since with few examples of work-based learning there has been no reason to elaborate mechanisms to coordinate it with school-based learning. However, in the search for possible models, there exist a handful of co-operative education programs of relatively long standing that can provide some guidance for emerging STW programs.

In this paper we examine a particular kind of connecting activity: the co-op seminars developed as part of the Cooperative Education Program at LaGuardia Community College in New York City. The co-op seminars, taken by students while they are in co-op placements, are intended to raise general issues about work, about occupations in general, and about the competencies required on the job. They serve as a mechanism of connecting a particular kind of school-based learning — the learning that takes place in the seminars themselves — with experiences on the job; but they also serve as a form of career exploration and a way of linking occupational students with some of the larger issues generally associated with the moral, political, and intellectual purposes of schooling. The Seminars have been an integral part of the co-op program since its inception, and have been continuously changed and elaborated since then, so they represent a well-considered effort to link school-based and work-based learning. While they have been developed in a community college, the possibilities they offer and the warnings they provide are equally applicable at the high school level, where much of the energy in developing STW programs will be concentrated.

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[1] For efforts to examine the existing experimental programs, see Hamilton (1990); Pauly, Kopp, and Haimson (1994); and Goldberger, Kazis and O'Flanagan (1994); for efforts to distill the lessons of existing work-based learning, see Stern et al. (1995).

In this paper we first describe the co-op program at LaGuardia Community College, since it provides the setting within which the co-op seminars take place. In the second section we describe the structure and purpose of the Seminars. Section III describes a number of seminars we observed, in order to illustrate the variety of pedagogical strategies that different instructors use. Finally, Section IV examines the implications of the co-op seminar, assessing how it might be used in other STW programs and outlining a series of problems that all STW programs must confront as they attempt to integrate school-based with work-based learning.

I. Co-operative Education in LaGuardia Community College

When LaGuardia Community College was established in 1971, its first president established a culture of innovation and experimentation that, faculty and administrators report, has persisted to this day. In part, this culture represented an effort to develop a particular niche, at a time when several community colleges were being established in New York. The spirit of innovation was also a vision of what a community college might be, since this institution was relatively unfettered by any long history or institutional orthodoxy or regulatory imperatives. Over the years there have been two major sources of innovation. From its inception LaGuardia has been a mandatory co-op college, in which all full-time students are required to enroll in co-operative education.[2] The rationales for co-op were and remain those commonly associated with co-operative education: the opportunity to learn in different ways, to connect school-based learning to its applications, to explore occupational alternatives, and to earn money while in school. In addition, LaGuardia embodies an unusual commitment to teaching, expressed particularly in a series of learning communities and in staff development designed to expand innovative teaching practices like co-operative learning and project-based education (Matthews, 1994; Gabelnick et al., 1990).

In other ways, however, LaGuardia is the epitome of a community college, particularly in the composition of its students and its embodiment of the "people's college". The variety of races and languages and ages at LaGuardia is almost overwhelming, even for two observers from California accustomed to great variation in community college students: there are 84 languages, and so many racial and ethnic groups that the familiar categories — black, Hispanic, Asian, or white — lose their meaning. LaGuardia is in many

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[2] To our knowledge, the only other community colleges with mandatory co-op are Cincinnati Technical College and the Ohio College of Applied Science, both in Cincinnati. These programs and their implications for STW programs are analyzed in Grubb, Dickinson, Giordano, and Kaplan (1992); Grubb (1995); Grubb and Villeneuve (1995); and Villeneuve and Grubb (1995).

was an educational representation of Emma Lazarus' stirring words on the nearby Statue of Liberty:

> Send these, the homeless, tempest-tost to me:
> I lift my lamp beside the golden door.

In the co-op program, every full time student — including those majoring in Liberal Arts — is required to enroll in three 12-week internships or co-op placements, varying from 15 to 40 hours per week, depending on the internship agency needs and the student's schedule.[3] Certain students are exempted from the co-op requirement, including those in areas that have their own practicums (like nursing) and evening students who are assumed to have jobs, and therefore not to need the introduction to employment that co-op provides.[4] In theory the three placements may progress from relatively introductory positions to more skilled and demanding employment, and this tends to happen in technical fields; however, when students use the co-op for career exploration, as is common for liberal arts students, this kind of progression is difficult to achieve. Students may receive credit by exemption for one co-op based on submission of a written analysis of prior work experience, or may waive co-op if they have had substantial work experience in their chosen major. Those who are currently employed may request to use their employment as an internship site or may attend an internship as few as 15 hours per week. Students earn 9 of the 66 credits they need to graduate from the three cooperative education courses; a cooperative education course is defined as an internship and a seminar. Because they are considered students while in co-op, they generate state and city revenue that is used to support the co-op program (and the co-op faculty in particular) and pay tuition equal to a 12 credit load.[5]

Students must have completed all the prerequisites for a major — which generally requires having completed coursework in remedial education or English as a Second Language (ESL) if necessary — as well as at least one introductory course in their major, and they must maintain a 2.0 average. These are mechanisms of quality control, of course, but they also mean that there are substantial numbers of students enrolled at the college who are not participating in co-op. For example, in fall 1994 there were 10,592 students enrolled in LaGuardia, with about 500 in co-op. However, of the 10,592 students, only

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[3] On the nature of co-op at LaGuardia, see Nesoff et al. (1990) and Weintraub (1992).

[4] However, a large fraction of the evening students are there to change their occupations, for which co-op would be valuable; and a small number of evening students do enroll in co-op.

[5] The funding mechanism for the LaGuardia co-op program, through regular attendance-based state revenue, is therefore similar to the funding in the Cincinnati programs. One administrator reported that the co-op placements generate about 4 percent of LaGuardia's overall revenue.

2,308 were eligible for co-op; the remainder were in majors that do not participate in co-op because they have their own practicum, or were evening students for whom co-op is not required, or had not yet completed the prerequisites for co-op, or had low GPA's that disqualified them. As a result, while only five percent of all students were in co-op, about 22 percent of eligible students were in co-op.

Faculty in the Cooperative Education Division have full faculty status and fulfill several roles. All faculty advises students, assisting them in setting individual learning objectives for the co-op experience, in selecting each co-op placement, and in evaluating and grading the internship experience; co-op faculty also teach in the Co-op Preparation Course. In addition, each faculty member develops and coordinates a number of internship sites, acting as a liaison between internship supervisors and students by screening students for those sites, arranging interviews with internship supervisors, and visiting the internship site during the internship period. Students may work with two faculty if they select an internship that is coordinated by a faculty other then their advisor. Also, some faculty elect to teach one of the co-op seminars, and are paid adjunct stipends for this additional responsibility. This arrangement provides continuity of advisement for students and continuity of coordination for internship placement sites.

The college publishes an updated listing of potential internship sites four times a year describing co-op placements available in various major areas[6], and each student receives faculty assistance in the selection of a placement. The kinds of co-op placements are, not surprisingly, quite varied. Co-op faculty report that many positions have been offered continuously over a number of years, with a number of agencies such as hospitals offering a mix of internships (including clerical, patient care, accounting and customer service). Placements in public and private enterprises differ in a number of ways. Public agencies usually accept both part- and full-time interns, usually offer volunteer rather than paid positions, are able to provide para-professional types of experiences, and have negligible hire rates following the internships. Private firms tend to offer less varied experiences initially, expanding responsibility as the student demonstrates the capacity to work well; they generally prefer a full-time commitment, provide a wage or stipend (usually in the range of $6 to $8 an hour), and often offer employment to students following the internship. Workplace supervisors in both the public and private sectors

[6] The majors at LaGuardia include accounting, animal health technology, bilingual teaching aide, business administration, business management, commercial food service, commercial photography, computer science, computer operations, computer technology, data processing, dietary technician, emergency medical technician, human services, liberal arts, liberal arts and sciences, mortuary science, nursing, occupational therapy, office technology, physical therapy, secretarial science, school food service, and travel and tourism. All of the licensure programs require a practicum whose content is dictated by the state, and are not included in the co-op program.

were forthright about their determination to match the task to the student's ability, and to increase responsibility as the student demonstrates competency. In addition, all of the supervisors and faculty we interviewed warned against assuming that co-op placements involve only low-level skills, pointing out that new technologies and workplace organizations require sophisticated decision-making, solving problems with clients, gathering and organizing data, and knowledge of the company structure for all employees. Contrary to conventional wisdom about the need for contracts or written agreements about placements, co-op positions are based on informal oral agreements between employers and co-op faculty.[7]

The co-op program has a well-developed rationale, elaborated over the years. The *Cooperative Education Student Handbook* describes three purposes:[8]

1. exploring various career interests, or confirming career plans;
2. applying classroom learning to real situations; and
3. practicing and/or strengthening interpersonal or work-related skills.

A more complex description of learning objectives includes the following (Weintraub, 1992):

- to use the skills learned in academic classes;
- to learn new knowledge and skills related to career goals;
- to improve interpersonal, communication and problem solving skills;
- to explore career opportunities;
- to set personal goals and find ways to achieve them;
- to increase self-understanding, assertiveness and resourcefulness;
- to assert needs and desires in work situations;
- to learn how work is organized and how people behave in work settings;
- to develop moral reasoning and judgment in work situations;
- to becomes aware of social issues and problems, such as sexual harassment, racial discrimination, unemployment and economic cycles;
- to learn and become familiar with American Society (for foreign students);
- to understand the different roles and interests of owners, managers and workers.

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[7] The same informal structure is also true in the Cincinnati co-op programs, profiled in Grubb and Villeneuve (1995) and Villeneuve and Grubb (1995, forthcoming).

[8] These and many other elements of the co-op programs and the integrative seminars are stated consistently in different college publications It seems, therefore, that there has been a conscious effort to develop a uniform vision of the co-op program, and then to convey that vision consistently throughout the program.

At an even more general level, Harry Heinemann — for many years the Dean of Co-operative Education programs — has served as a kind of theoretician of co-op and of the role of the co-op seminar. He first articulated a model of co-op (Heinemann, 1983) in which classroom instruction drove the co-op experience, and in which work placements were "field laboratories" in which concepts and theories introduced in the class would be applied or observed on the job. A more recent version (Heinemann, DeFalco, and Smelkinson, 1991) acknowledged that this earlier model was limited because it restricted the lessons of work-based learning to the perspectives of a single discipline; in the most recent articulation, work-based placements should be viewed from a variety of disciplines, and the work experience (rather than the classroom learning) becomes more central. As is apparent in the next section, LaGuardia currently operates co-op seminars under each of these rationales. Elsewhere he has clarified the Deweyan roots of co-op education (Heinemann and DeFalco, 1990), as "an educational experience that will integrate the world beyond the classroom and the curriculum" (p. 39). As a result one can find at LaGuardia a highly-developed conception of the role of co-op within a broader education.

However, the extent to which co-op faculty and adjunct instructors understand the complexity of these goals for co-op education is unclear. To be sure, the faculty and adjunct instructors we interviewed were highly committed to co-op, and understood it as an important complement to class-based instruction. However, most of them stated that the purposes of co-op at LaGuardia were not written down, and — not surprisingly, for a program with many different facets — they stressed different aspects of co-op, just as instructors everywhere differ in their conceptions of education and of which elements are most important. One stated that "You should know the rationale for this class: in my opinion, it is to adhere to career exploration, " while others were clearly more committed to conveying specific information or to communicating the norms of the workplace. In the classes we observed (described in Section III below), these differences emerged as varying emphases in the material presented, with some possibilities ignored by certain instructors. One implication of the variety of perspectives about co-op education is that, in order to realize the potential of the many different forms of learning that can take place with the help of work-based learning, instructors need to understand this variety of purposes.

The co-op program at LaGuardia has many elements to it, and the college has been careful to articulate the role of each of them. There are nine sources of learning:

1. The Co-op Prep course: This is an introductory course to cooperative education in which students are automatically enrolled following the completion of basic skills

prerequisites and at least one introductory course in their major, ideally prior to accumulating 18 credits. Co-op Prep is a 12 hour course in which students assess their accomplishments, skills and interests; gain an understanding of pluralism as it relates to one's self worth and work; evaluate work needs; learn to devise individual internship and career learning objectives; write a resume; and participate in a mock interview.

2. Meetings with the Co-op Faculty Advisor: Following the Co-op Prep course, each student meets individually with his/her Co-op Advisor to develop learning objectives for the internship experiences, and to select internship sites. Later, the advisor also works with students to resolve any difficulties related to the internship and to evaluate internships when they are complete.

3. Work environment: the site where the internship takes place.

4. Job tasks: the specific tasks which the intern performs on the internship.

5. Learning objectives: The faculty advisor and the student develop specific learning objectives for each internship. Objectives fall into the categories of strengthening interpersonal or technical skills; exploring career opportunities; and applying classroom learning to the internship site.

6. Co-workers: the permanent employees with whom the intern interacts at the internship site.

7. Work supervisor: the intern's immediate supervisor at the internship site.

8. Faculty coordinator site visit: the interaction between the student and the faculty coordinator for the internship site during the internship review and evaluation visit.

9. The co-op seminar: a six-week evening or weekend course taken in conjunction with the internship (and the subject of the next two sections of this paper).

The purpose of this extensive list is that the college clarifies, to students and to employers alike, that there are many distinct elements of co-operative education: it is not simply a job whose implications for learning are taken for granted, but an experience where many different elements contribute to the overall learning that takes place.

In addition to the co-op seminar itself, several other elements of the co-op program could be viewed as connecting activities. The co-op faculty advisor is obviously the most crucial link between the institution (and the student) and the employer. In addition, the co-op prep course is a kind of connecting activity that could be adopted in all school-to-work programs. This 12-hour course introduces students to the co-op program, starting with the rationale for co-op: "LaGuardia's educational philosophy is that learning takes places in many different settings both in and outside the classroom". Co-op Prep also prepares students for their first co-op placement, by developing both their behavioral and their

general job-related competencies. It teaches them some of the skills necessary for finding a co-op placement, including those of writing resumes, filling out applications, interviewing for jobs, and the like. Sections of the course ask students to state their "life accomplishments" and to consider their own skills and proclivities, and are therefore related to career exploration — one of the prominent purposes of the co-op seminar as well. To be sure, such activities are common in occupationally-related programs; however, the advantage of the co-op prep courses is that the application of these skills is immediate, as students begin to search for co-op placements. Indeed, from our observations of several co-op prep classes, the anxiety of students preparing to go out on a real interview for a real job is so high that some version of co-op prep is crucial.

From the conception of nine separate sources of learning, and the elaboration of such elements as co-op prep and the co-op seminar, it is clear that LaGuardia has thought hard, over a long period of time, about the multiple elements of a successful program. One implication for school-to-work programs, then, is that they should not simply be considered as ways to add work placements to school-based programs. Instead, school-to-work programs need to be considered as a complex series of experiences, combining a variety of both in-school and out-of-school activities, each of which can contribute to the overall quality of learning.

A final and crucial aspect of LaGuardia's co-op program is its relationship to the rest of the institution. The co-op faculty have full faculty status, and therefore participate in all governance process mechanisms and in staff development activities of the college. In addition, there have been many examples of collaboration between co-op and other departments: the development of curriculum materials and the T.A.R. approach (described below) was a joint activity involving both co-op faculty and occupational faculty; there have been joint activities in curriculum planning, identifying workplace applications relevant to coursework, and initiating new courses or programs, and sharing in professional development. The co-op program has worked with the English department about how to bolster student writing, and with humanities faculty about how to increase oral communication skills; a mandatory human, technology and society course for all liberal arts majors was jointly developed with co-op faculty; a math instructor helped develop the co-op seminar; and co-op faculty jointly developed the Education Associate curriculum, now in the social sciences department. However, despite the frequency of these forms of collaboration, they seem to focus on particular tasks and then evaporate; there are no on-going or systematic efforts to coordinate the content of "regular" (non-co-op) classes with the co-op placements; most of the non-co-op faculty have little awareness of what takes place in the co-op program; and few faculty make use of co-op experiences in their classes.

Over the years there has not been a systematic effort to "market" co-op to the regular faculty, so that special benefits of co-op education are unknown to many faculty. The sense of LaGuardia as a unique "co-op college" has therefore dissipated as new faculty have joined and as the numbers of part-time faculty loosely connected to the institutions have grown. To some extent, then, the co-op program has the feel of an appendage, serving large numbers of students yet in some way peripheral to the core of the institution. This illustrates the problem with maintaining innovative educational practices over time, particularly in institutions with new faculty and part-time faculty who come in with much more conventional notions of what colleges are.

A potentially dire consequence of the separation of co-op from "regular" programs separation is occurring now, with a budget crisis of unprecedented magnitude. The CUNY System, of which LaGuardia is a part, has called for budget cuts up to 40 percent. This situation has unleashed a war of all against all, in which co-op education is particularly vulnerable because of its peripheral and non-course status. In particular, many faculty have been looking to cut the 9-credit co-op requirement because of a need to find credits for remedial purposes in already-crowded student schedules.

In this respect, unfortunately, LaGuardia is no different from the other exemplary co-op programs we have examined. In the two-year colleges in Cincinnati, the mandatory co-op programs are also virtually independent of the classroom-based component (Grubb and Villeneuve, 1995; Villeneuve and Grubb, 1995). This kind of separation not only reduces the potential for school-based and work-based components to reinforce one another; it also creates political problems, particularly in periods of declining resources. The co-op administrators at Cincinnati Technical College have been nervous about the future role of co-op as that institutions becomes a comprehensive community college, since they fear that an academic component will diminish the perceived importance of co-op. For school-to-work programs, the separation of work-based and school-based components — even in institutions with exemplary co-op programs of long standing — indicate how difficult it may be to knit the two together.

II. The Structure and Role of the Co-op Seminar

The co-op seminar was part of LaGuardia's program since its inception. It was originally conceived as an opportunity to reflect on work placements — to convert what might otherwise be ordinary employment into a truly educational experience. The early

seminar were quite loosely structured, and came under criticism from students who complained about having to give up precious evenings and weekends for what seemed to be ordinary rap sessions. In response, the seminars have been developed over time, with much more carefully-defined purposes, structure, and curricula.

During each of the three internships, students attend a co-op seminar once a week for two hours, for a total of 12 hours. The co-op seminars are scheduled in the evening or on Saturdays, so as not to interfere with normal work hours. In general terms, the seminar provides a framework for analyzing and evaluating students' internship experiences, linking work experience with critical analysis and reflection. The seminar is not used to deal with personal difficulties at the internship site; instead, these are managed through individual counseling and planning sessions with the Co-op Adviser. Rather, the LaGuardia model conceives of work experience as a field laboratory for applying concepts introduced in the seminar and for collecting data to analyze in the seminar. Students then analyze the results of their data via written exercises and group discussion. The internship or field experience is characterized as participant observation, applying research methodologies such as interviewing, identifying critical incidents, document review and systematic observation (Heinemann et al., 1991). The internship enriches the learning process of the classroom seminar in multiple ways, leading students to appreciate the role of each worker within an organization and larger issues of organizational systems and processes.

The college has identified eight goals for students in the seminars:[9]

1. To gain meaning from the day-to-day occurrences of the internship;

2. To broaden understanding of theoretical concepts as they apply to real-life situations;

3. To develop insights into the relationship of the self to work and to the larger society;

4. To understand personal values and strengthen awareness and appreciation of differences;

5. To understand the steps required in the career decision-making process to plan for professional mobility and lifelong learning;

6. To develop the personal and professional skills and strategies that will facilitate success in the next stages of life;

7. To enhance a broad array of skills for success in the workplace;

8. To encourage contributions to the community and become responsible citizens of a multi-cultural society.

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[9] See the *Education Mission* of the Division of Cooperative Education, March, 1995.

There are three levels of co-op seminars, each taken during one of the three co-op placements. The first and third co-op seminar may either be generic, focusing on general workplace issues, or major-specific, focusing on applications particular to a student's major area. Whether a seminar is generic or major-specific depends upon a student's schedule and the college's ability to generate high enough attendance to justify a class for a specific major. The second level seminar, "Fundamentals of Career Advancement", is common to all students.

Level 1 Seminars

There are five major-specific seminars[10] and one generic seminar offered at level 1. At this initial phase, topics include information gathering, data organization, quality standards, maintaining currency in technical skills, and other issues specific to the major. Examples of classroom activities include working as teams to identify data from financial reports, using case studies to evaluate information and hardware systems, brainstorming questions to ask in an interview, and simulated production exercises. Examples of field assignments include describing document flow at the internship site, analyzing span of control and specialization, identifying services available in a school neighborhood, evaluating quality standards in school food service, and listing job classifications within their internship department. In addition, students are led through a series of activities which apply technical skills formerly mastered in a classroom setting, such as identifying document purposes and information flows.

The generic Level 1 seminar, "Understanding Critical Issues at Work", allows multidisciplinary perspectives on common aspects of the workplace. In classroom exercises, students apply theoretical concepts such as corporate culture, organization schema, leadership styles, and corporate ethics. Field assignments direct students to identify ways in which their internship site encourages team work, describe physical clues to indicate power and level of authority, compare corporate values in centralized and decentralized systems, and analyze the consequences of ethical dilemmas.

The Level 2 Seminar

The Level 2 seminar," Fundamentals of Career Advancement", is common to all students, and focuses on using the workplace to gain information about skill and personal requirements for upward mobility. The text (Ducat, 1994) emphasizes solving career

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[10] The five Level 1 major-specific seminars are: Accounting Information Systems; Application of Computer Information Systems Concepts in the Workplace; Management Principles: Theory and Application; Introduction to Teaching

dilemmas through self-assessment, gaining further education, learning from experience, researching reliable career information and career networking. Using short practical exercises, research activities and case studies, students gather and analyze information about career options and about four year colleges. An important element in this second seminar is a "map" for extracting the greatest potential learning from any work experience, by replicating strategies used by successful executives: seeking challenging assignments; coping with hardships; observing key people; and getting feedback on strengths and areas for improvement. Students visit the Campus Career Center to research career and educational opportunities.

Level 3 Seminars

As with the first seminar, both general and major-specific[11] seminars are offered. The major-specific seminars demand the use of systematic research skills in an independent and professional way. At the advanced level, students are expected to review theory while applying complex knowledge to their fieldwork experience. In the accounting seminar, for example, students follow a detailed outline for analyzing systems or information flows at the worksite. Each week they gather components of a final, comprehensive paper and work in teams to evaluate data and to proofread draft papers. In the food service management seminar, students critique and design operational systems as well as develop personnel selection, training and supervision practices. During our observation, these students examined promotion policies from legal, union, employee morale, and organizational perspectives.

The generic Level 3 seminar is titled Humanism and Technology, and is designed to examine the major issues with which technology confronts modern society. The seminar parallels a required liberal arts seminar of similar title, incorporating literature and popular press readings to present multiple perspectives. This co-op seminar is currently being modified to be appropriate to the experiences of all students.

Instructors

The instructors for the co-op seminars come from different backgrounds. Some of them are local employers, who teach because they like to have personal involvement with students in the co-op program; for example, the vice-president of a hat manufacturing company located two blocks from the college, a senior director with the New York City

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[11] The four Level 3 major-specific seminars are: Accounting Information Systems for Decision-Making by Objectives; What Do Managers Do: An Advanced Approach; Advanced Computer Information Systems; School Food Service Management. Students in the education major complete a practicum arranged through that department.

Partnership, Inc. (which coordinates public and private efforts to improve the economic environment of New York City), and the director of food service at Rikker's Island all teach co-op seminars. Others are co-op faculty who are paid extra to teach an Co-op seminar; they are obviously much more familiar with the structure and purpose of co-op and of the co-op seminars than are other instructors, although they lack the real-life experiences of employers. A very few are instructors or administrators in other divisions of LaGuardia, who teach a co-op seminar as a logical extension of the theoretical skills taught in the classroom.

One of the special advantages of instructors from the business world is that they can provide "true stories" from the workplace — descriptions of actual workplace situations and problems that students seem to find fascinating. Of course, students have their own "true stories" from their co-op placements, but the tales that employers tell have the weight of experience and the stamp of authority. One interpretation of student fascination with these "true stories" is that they represent a way of teaching about the customs and folkways of the workplace — dimensions of employment that cannot be taught in conventional classes, and that are crucial to success of the job. In contrast, faculty are less likely to have the kinds of recent experiences in work that would provide a fund of "true stories".

Beyond an annual co-op orientation, seminar instructors from outside the college have no access to any form of staff development. Co-op faculty and administrators have access to various staff development activities, which often involve aspects of teaching; however, the year-long seminar that promotes active instruction is available to only one or two co-op faculty each school term, and this is certainly not mandatory. Not surprisingly, given the differences in the backgrounds of instructors and the lack of any explicit attention to training, the emphases of different instructors vary considerably. Some focus on career exploration to the exclusion of the other purposes; others stress job-specific skills, or behavioral aspects of the job. And of course individual approaches to teaching vary considerably (as we describe in Section III) . However, LaGuardia has tried to anticipate the variation among instructors by developing a series of curriculum materials for the co-op seminars, described in the next section. The manuals therefore allow an instructor without much background in education and without much prior experience in the co-op program to teach one of the co-op seminars.

The Use of Standardized Curriculum Materials

To some extent, the content of the seminars has been standardized, particularly through the use of texts, written by various faculty member at LaGuardia, that provide topics, classroom exercises and fieldwork assignments. (An exception to the standardized

curriculum is the third level generic seminar, "Humanism and Technology", a changing course that has not yet been fully elaborated.) Each seminar session tends to encompass 3 to 9 pages of text, one page of reading comprehension questions, a classroom simulation or case study from which students make judgments and draw conclusions, and a field assignment to be completed from observation or interview at the internship site.

Case studies and simulations often form a basis for problem-solving exercises. Student analysis of a particular case is guided by the instructor, relying in part on questions embedded in the seminar text; for example, students analyzing the culture of the PepsiCo Company follow a set of questions to discern the primary mission, culture, organizational values, and the relationship of competitiveness to employee morale. Homework assignments link seminar theory to internship experiences by requiring highly specific observations, such as contrasting the language style used among co-workers with that used with supervisors; describing corporate rituals practiced at the internship site; comparing home and work rituals, dress and language style; and assessing the fit between personal values and the culture of the internship site.

In the past, the co-op program has tried to promote an approach to teaching that it calls T.A.R. — for Teach - Apply - Reinforce — that reappears in many of the seminar texts. For example, the workbook for the introductory seminar in accounting describes the teaching component in the following way: "You were taught certain concepts in Principles of Accounting II and Co-op Prep which will be the educational focus of your internship. These concepts are called T.A.R. concepts. You used T.A.R workbooks to focus on these concepts." Then the application of concepts takes place in the work setting: "You will observe how T.A.R concepts apply to your work setting during your first internship. You will use this *Internship Workbook* to guide you." Finally, concepts are reinforced: "In your internship seminar, you will reinforce the T.A.R. concepts you have observed in your internship setting." The T.A.R. approach could be considered an approach to teaching suitable for integrating work-based experiences into the classroom, particularly for instructors without experience in doing so. However, it is unclear how uniformly the T.A.R concept is used by instructors; as new instructors have come into the program who were not associated with its development in the 1980s, the use of this pedagogical device seems to have weakened. This is, of course, part of the larger problem of maintaining a distinctive educational approach where there are many new and part-time faculty who need to be socialized to unfamiliar practices.

Many of the major-specific materials were written during the mid-1980's under a Department of Education grant for integrating cooperative education and classroom learning. Co-op administrators acknowledge that these materials are outdated, due to

changes in business technology and workplace practices; however, there are no funds available to update these materials — which are voluminous. The lack of funds is unfortunate for another reason: the process of writing the seminar texts during the 1980's apparently brought together co-op and "regular" faculty, in ways that otherwise do not happen.

From our observation, the standardized curriculum reduces differences between instructors in content and focus, as well as overcoming many of the difficulties related to weak pedagogy. Even in cases where we observed a reliance on traditional lecture and poorly-planned audio-visual materials, the students were clearly engaged by the topics of the seminar. However, no attempt to "teacher-proof" a curriculum can be completely successful, and so the quality of instruction and the approach to teaching varies considerably among instructors (as we will see in Section III). Of course, this is precisely what happens in most educational institutions, including community colleges[12] The only surprising element is that, while LaGuardia is one of the few community colleges to make teaching an institution-wide priority, they have not extended this emphasis on teaching to the co-op program.

The Multiple Purposes of the Co-op seminars

In practice, the co-op seminars serve one of three purposes. The first is allowing students to explore the career options they face. The importance of career exploration, in our view, cannot be overstated: many students come to community colleges unsure of what they want to do and trying to "get a life" for themselves. Even at LaGuardia, where students often apply and are accepted for a particular major, the co-op seminars allow students who have come from foreign countries and are unsure about American jobs and opportunities an avenue to evaluate their initial career decisions. Unfortunately, most community colleges provide little help for student trying to investigate their career options, and so they take courses aimlessly or enroll without clear intentions in the transfer program because it is the most obvious alternative.[13] However, the co-op seminars provide a

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[12] This statement is based on an on-going study directed by Norton Grubb of teaching in community colleges, based on observations of about 225 classrooms as well as interviews with instructors and administrators. Although community colleges pride themselves on being "teaching institutions", very few of them have made good teaching an institutional priority, and so high-quality teaching remains individual and idiosyncratic. LaGuardia is one of the few community colleges to make teaching a priority of the institution.

[13] These statements are based on a series of in-depth interviews with about 40 community college students in California, exploring their reasons for enrolling. The surprising results was that both the younger students, who had usually left high school without much sense of what they might do, and the older students, who had frequently been closed out of a promising career through no fault of their own, were trying to "find a life".

combination of a work placement and time for reflection, a much more active form of career exploration and validation than is usually available in either high schools or community colleges; this results in a high rate of changes in major as students select careers matched to their interests and aptitudes. However, the co-op seminars provide a combination of a work placement and time for reflection, a much more active form of career exploration than is usually available in either high schools or community colleges. As one of the manuals for "Understanding Critical Issues at Work" expresses the benefit:

> Through LaGuardia's unique education program called Cooperative Education, you are temporarily allowed to leave the world of classroom academics and to enter the world of work for specific periods of time. "Co-op" gives you the chance to try out career fields to see if they are right for you. You may not fully realize at the present time how beneficial an opportunity this is to your own career development and discovery. "Co-op" will enable you to make better informed career decisions because it provides a real life laboratory to test your career goals and aspirations.

A second purpose, particularly of the major-specific level 1 and level 3 co-op seminars, is to present certain skills and competencies required on the job. Some of these are "academic" topics conventionally taught in classrooms, like accounting systems, computer programs, and specific approaches to management. In other cases these may be behavioral competencies; for example, one of the co-op administrators stressed the value of the co-op seminar in acculturating foreign-born students to the norms of American workplaces — for example, training students to look supervisors in the eye and to engage with fellow workers and supervisors in the apparently egalitarian and informal style of most work settings. However, unlike the presentation of job-related skills in conventional classrooms, these skills are presented in the co-op seminar as part of a total system of production, in which tasks are part of a larger organizational structure. In many cases, instructors make good use of the work placements students are in, for example by contrasting specific accounting practices with textbook methods, or by locating particular tasks within a larger production system. In these ways students can come to understand the ways in which the practices and competencies learned in the classroom are applied and modified on the job, and in turn they can explore the origins of particular practices they observe in their work.

The third purpose of some co-op seminars is the more humanistic one of raising large issues about work, its influence on individuals and on society. In many ways this is similar to the intent of general education requirements, except that students can use their own specific employment — rather than fabricated or contrived descriptions of employment — to explore the larger social, ethical, political, and moral themes associated with working. However, most students in the Humanism and Technology Seminar are liberal arts majors

(since most other students take major-specific Level 3 seminars), and so the potential purpose is less well-developed than the other two.

The Flexible Purposes of the Co-op seminar: Changes Over Time

Over the past decade, the co-op seminar has undergone a number of intentional changes in purpose and in content. Until about 1990, the Level 1 and 3 seminars were major-specific, with registration limited to students with shared career goals and courses. Fiscal constraints made the low enrollments in some of the courses untenable, and the college began to develop a series of more generic seminars. However, generic seminars offer a number of benefits in both philosophy and practice. The mobility of workers and the changing nature of work proscribe narrow career preparation, and a mixed population of students within a seminar offers a wider perspective on possible careers. In addition, all careers share a core of employability skills, including an ability to understand the larger system in which one completes discrete tasks and an appreciation of the cultural norms of a particular work site. In creating generic seminars, LaGuardia has moved closer to a metacognitive approach to experiential learning, in which students gain a "map" for understanding both the current internship site and future employment opportunities. The change also reflects the shift in Harry Heinemann's thinking about co-op programs, away from the conception of co-op as a kind of laboratory for the seminars to a conception of the co-op placement as an experience to be examined from multiple perspectives and disciplines.

The seminars offer flexibility in other ways as well. An example is the food service management program and its associated seminar. Under the joint auspices of the School Employees Union and LaGuardia, experienced entry-level school cafeteria employees who show management potential are nominated for the training required to qualify for foodservice manager. Nominees who fail to meet the skill requirements at LaGuardia receive tutoring through a union-sponsored program. Frequently, students who enroll in the foodservice management co-op program elect to complete their degree, encouraged by a course schedule adapted to their work hours. Interviews with students, mostly mature women, enrolled in this program indicates great satisfaction with the accommodation LaGuardia has made in scheduling and with the union-supported tutoring in basic skills.

III. The Conduct of the Co-op seminars

In general, instructional methods in the co-op seminar incorporate a range of practices including traditional lecture, class discussion about an identified topic, simulations, role-play, and faculty sharing of personal experiences ("true stories"). Not surprisingly, given the variation in the backgrounds of instructors and the lack of instructor training, instructional methods vary according to faculty expertise and seminar topic.[14]

In one level 1 seminar we observed, an entire class was filled with "teacher talk" about a series of articles he had distributed. The instructor stood in the front of a conventional classroom, with students seated in rows facing the instructor, and asked a series of factual questions about newspaper ads related to employment opportunities. By and large the questions required students to give the literal meaning of the ads, and were close-ended questions that students could answer without any reference to their own jobs; only one open-ended question was asked — about why the secretarial field is still dominated by women. The instructor distributed a handout about ten ways to keep a job, and another about the ten best and worst jobs within the computer field. He began a video, but it proved to be the wrong one (it was an old Ed Sullivan show); he then reverted to a series of factual questions and answers about medians and means and about the instructions for a project due at the end of the course. [15] In addition to his unengaging didactic format, the instructor missed a number of opportunities to add to the knowledge and understanding of his students. He reinforced career stereotypes — that secretaries are paid poorly, that men are more likely to go into computer fields that pay more) — without asking students to think about the economic and social aspects of these stereotypes; he elaborated his own biases, particularly about the difficulty of the Internet; and he failed to connect the content of the class to the work placements of students in many ways. Given the interminable lecture-style presentation, the attentiveness of students was quite high: evidently the content of this course was engaging to students, even if the method of instruction was not.

In other cases, however, we saw instructors taking very different approaches, posing questions that asked students to think critically about employment practices and to evaluate their own work placements. One class, taught by the vice-president of a nearby firm, is organized around a set of 14 "analysis questions" about the accounting system used in the students' work sites. In the class we observed, the instructor led a whole-class

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[14] During a one-week visit one of us (Norena Badway) observed 12 seminars, with observations ranging in duration from 30 minutes to 60 minutes. We did not, therefore observe anything like the majority of seminars, and the time spent in each was much less than the 6 to 12 hours of observation that have been typical in the study of community college teaching mentioned in footnote 10. However, we have no reason to think that the classes we observed were skewed in any particular way, and we interpret our observations as suggestive of the range of teaching that takes place.

[15] The pattern of instructors asking close-ended, factual questions — sometimes known as IRE, for inquiry-response-evaluation — is quite common in community colleges; while such a class may appear to have some discussion, in fact it is completely teacher-dominated and fact-centered.

discussion about four particular questions that would serve as the basis for future papers; then the class then broke into small groups to compare their own internships in the light of the four analysis questions, and then discussed the preliminary results with the class as a whole. In general, students reported a variety of different business practices in their workplaces, and were initially baffled; however, they came to understand why such variations in practice arise, and the instructor (from the business world himself) helped to both explain and justify these variations. The level of student engagement was very high, both because the exercise was intrinsically interesting to students studying accounting and because the students felt some pressure to develop draft answers in class, where they could have the support of their peers and the instructor. While the practice of doing a draft for a future paper with help from others is not widely practiced in standard academic courses, this kind of cooperative approach is much more typical of workplace settings. And, unlike other classes we observed, the practices in students' co-op placements were central to this seminar.

In general, however, the co-op seminars seemed to be dominated by lecture and by "teacher talk", rather than by the kinds of open-ended questions that would get students to reflect about their own work experiences and compare them with the skills and competencies learned in the classroom. In the worst of these cases, instructors missed important opportunities to add to the knowledge and understanding of the students, often by failing to respond appropriately to their questions. Instructors reinforced career stereotypes— that secretaries are paid poorly, that men are more likely to go into computer fields that pay more— without asking students to think about the economic and social aspects of these stereotypes. These instructors elaborate their own biases— about the difficulty of using the Internet and that mothers of young children should not work— and missed opportunities to connect the content of the class to cultural understandings about work or the internship experience, such as building potential career ladders based on students present employment or contrasting formal education and experience as vehicles for skill development. In a couple of particularly frustrating instances, seminar instructors completely missed the contrast in student expectations about education as a means of gaining "insider information" about how to live in American society versus a means to achieve greater earnings. Given the uninspired lecture-style presentations, the attentiveness of students was surprisingly high; evidently the content of the seminars is engaging to students, even if the method of instruction is not.

Even among those instructors who tend to dominate in lecture-style presentation, a crucial difference is the willingness of instructors to respond to student interests and puzzlement — that is, to exploit the opportunities that student initiative presents. One

instructor, for example, dominated the classroom with a kind of lecture on self-improvement, the importance of "good attitude", and other aspects of finding a job; but she was also receptive to student questions, and used them as opportunities to expand students' basic knowledge, to inform them about resources for selecting careers that they otherwise didn't know, and to bring in current information about job futures and how new careers are taught at LaGuardia.

To be sure, classroom interactions are only one element of the co-op seminars. Most of the co-op seminars involve writing. Examples of writing assignments include explaining the procedures used to convert input data into useful information through both a flowchart and a descriptive narrative; evaluating the effect of a supervisor's leadership style on the student's internship performance; evaluating alternatives for decisions that they made at their internship; and creating an "agency profile" by analyzing the student's workplace in relation to the community it services. These writing exercises reinforce writing abilities, and students are judged on the basis of standard writing techniques as well as content. However, rather than methods of teaching writing, these exercises are best understood as forms of "writing to learn", in which writing is used as a mechanism to get students to clarify their own interpretations, and then to consider alternatives with the help of the instructor. They therefore provide some opportunities for student initiative and reflection that classrooms dominated by teacher talk do not.

To be sure, the range of teaching approaches in the co-op seminar is no different from that we have observed in community colleges generally: even in what seem to be seminar formats, teacher talk and lecture-style presentations are common. But however common didactic and teacher-centered instruction is, this approach within the co-op seminar is especially unfortunate, in our view. The major purposes of the seminar, as expressed by the college and by most instructors go far beyond information transfer — the purpose most associated with didactic methods.[16] The crucial purposes are instead to allow students to think about their career options, to understand the nature of their work and work in general, to analyze the value of classroom learning on the job, and to explore the large humanistic and social issues surrounding employment — all questions that are intrinsically interpretive, and that cry out for more student-centered, constructivist approaches to teaching in the tradition of meaning-making.[17] This suggests that, if schools

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[16] Of course, many individuals would claim that didactic methods are not effective even in information transfer.

[17] For an introduction to the approach of meaning-making, contrasted with the more conventional approach of "skills and drills", see Grubb and Kalman (1994). Approaches in the meaning-making tradition are precisely the methods that the staff development efforts at LaGuardia Community College have promoted, and that are more widely used there than in any other community college we have observed.

are to adopt some practice like the co-op seminar as a way of connecting work-based and school-based learning, it is crucial to be self-conscious about the approaches to teaching used, and to institute the training and staff development necessary to develop alternative approaches to seminars.

IV. Conclusions: The Implications for School-to-Work Programs

The co-op seminars at LaGuardia Community College developed for almost the same reasons as the connecting activities of the School-to-Work Opportunities Act have been proposed — to link school-based and work-based learning. It is, we think, relatively clear that an approach like the co-op seminars can be successful in that role. In doing so, there are a number of lessons from the LaGuardia experience that should be considered in setting up such connecting activities.

• All students at LaGuardia, whether occupational students or liberal arts majors, are required to complete a series of work-based placements. This creates a large number of students in co-op, which in turn creates a culture in LaGuardia in which co-op comes to be appreciated. In contrast, within an institution where only a few students are enrolled in work-based learning, it would be impossible to generate a supportive culture around school-to-work programs or to develop anything like the co-op seminars.[18]

The presence of large numbers of students in co-op also creates the economies of scale necessary to create certain elements —like the co-op prep class and the co-op seminars themselves — that support work-based learning. The sizes of these classes tend to be between 15 and 25, and with smaller numbers it would be much more expensive to provide such classes. In addition, the constant refinement of the co-op program in general and the co-op seminars in particular could not take place unless there were substantial numbers of students enrolled.

• A work-based program (like co-operative education) is much more than a simple experience at work. There are many different elements with potential educative power, ranging from work experience coordinators, to fellow students, to fellow workers, to intentionally-structured exercises like the co-op seminar and the co-op prep seminar. Some

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[18] We are particularly concerned with what appears to be a common development under the School-to-Work Opportunities Act — a practice of designating a local organization to find work placements available to students from any of the schools in a community. In this organization of STW, there is no natural involvement of any one school, and within a particular school there will be too few students in school-to-work activities to create a supportive culture of integrative seminars.

thought about the potential role of each — rather than, for example, thinking of some of these elements (like co-op faculty) as purely administrative and others (like the role of fellow students) as inconsequential — can enhance the educational potential of any work-based experience.

Similarly, work experience is not an end in itself, with a self-evident educational potential. In the LaGuardia approach, the work placement is viewed as a laboratory for applying the concepts introduced in classroom instruction allowing students to relate their particular daily routines and tasks to the larger institutions in which they live.

• At LaGuardia, work placements and seminars are started *after* a student has completed one or more courses in his or her major (as well as after any remedial work is completed). This allows students to begin their work and the related seminars with a foundation of relevant knowledge.[19]

• In many institutions, the responsibility for work experience programs is given to existing administrators (and instructors), adding to their burdens and virtually guaranteeing that work-based learning will be badly neglected. The LaGuardia experience clarifies that work-based placements, and the co-op seminars associated with them, require adequate resources for coordination and instruction. (Indeed, this is a logical activity on which to spend federal funds from the School-to-Work Opportunities Act.) The development of connecting activities like the co-op seminar also requires stability (including consistent support from administrators over time), since developing the co-op seminars at LaGuardia has been a process of successive refinement and adjustment over two decades.

• The selection of faculty for connecting activities like the co-op seminars needs to be carefully considered. Individuals who come from the world of work have special advantages, since they can provide "true stories" and other forms of socialization about workplaces; indeed, this seems to be an ideal way to involve individuals from the business community. But, depending on their backgrounds and instructional proclivities, co-op and other faculty have certain advantages as well. Finally, little thought has been given to the inclusion of non-co-op faculty in the LaGuardia co-op seminars, though the potential for doing so as a way of reinforcing certain academic content is high.

• The pedagogy of connecting activities like the co-op seminar should be carefully considered. Although didactic instruction based on the methods of "skills and drills" is certainly common in high schools and community colleges, this is probably the least effective approach to the issues raised in the co-op seminar.

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[19] See also the discussion of quality control mechanisms in the Cincinnati co-op programs and their contribution to creating a "high-quality equilibrium", in Grubb and Villeneuve (1995) and Villeneuve and Grubb (1995).

An alternative way to assure the quality of connecting activities like the co-op seminar is to adopt standardized content, texts, and learning activities, as the LaGuardia program has. In this way, all students share a common core of content and learning, no matter what the idiosyncrasies of individual instructors are. Quality control can also be maintained through class observations by administrators and student evaluations. However, we caution again the idea that any form of instruction can be "teacher proofed", since student understanding of employment-related competencies and interpretation of career possibilities cannot be achieved simply by programming teachers to follow a set curriculum.

• If pedagogy is important, then instructor training cannot be neglected — particularly if instructors have varied backgrounds. There are many resins to think that, without special intervention, most teachers used conventional didactic, teacher-dominated approaches: community college faculty are not required to undertake training in instruction; the criteria for employment often neglect pedagogical expertise; and most individuals without training in instruction— including most individuals recruited from industry— are likely to teach the way they were taught, again leading in most cases to ineffective instructional methods. Although revising an instructor's approach to teaching can be difficult (Tharp and Gallimore, 1988, Ch. 10), we see no way of avoiding this task if the promises of connecting activities are to be realized.

• The co-op seminar (and potentially other connecting activities) can have multiple purposes. While the main purpose might be that of allowing students to see how classroom instruction is applied in work, the other purposes associated with LaGuardia's efforts — career exploration, and the analysis of large social and humanistic issues connected to employment — are powerful too, and may in fact be even more valuable aspects for individuals like high school students who are confronting occupational choices. While individual instructors and students will emphasize different purposes in different ways, of course, the varying needs of students can be better served if a program retains a multiplicity of purposes rather than imposing a single conception.

• Above all, it has been discouraging to find that work-based activities and classroom-based instruction are so independent, even in institutions (like LaGuardia and the Cincinnati colleges) with the longest commitment to co-op education. At LaGuardia, this division exists in the lack of communication between the co-op program and the "regular" programs; at the Cincinnati colleges it can be seen as a potential rivalry between the co-co programs and academic instruction, particularly in one institution that is changing from a technical institute to a comprehensive community college. The divide is evidently so deep that a commitment to work-based learning is not enough to lead to a real integration of

the two. A continued separation in school-to-work programs is of course detrimental to students, who then have to figure out for themselves the commonalties in the two forms of learning. More seriously, over the long run such a separation threatens the very existence of work-based learning, since instructors uncommitted to work-based learning will vote against it at the first sign of fiscal distress. The most discouraging aspect of the LaGuardia program is that, although it is a "co-op college" and has refined its co-op programs continuously, the current fiscal crisis is so threatening to co-op. It has been difficult over the years to maintain the culture of a "co-op college", particularly with the instability associated with the growth of new faculty and of part-time instructors with little time or resources to improve their teaching abilities.

The only way in which school-to-work programs can find a permanent place in schools and colleges, then, is for the work-based component to become so central to the educational purposes of the institutions that it becomes as unthinkable to give it up as it would be to abandon math, or English, or science. The School-to-Work Opportunities Act provides both the impetus and resources to do so — in ways that can redress the century-old inadequacies of school-based preparation alone.

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